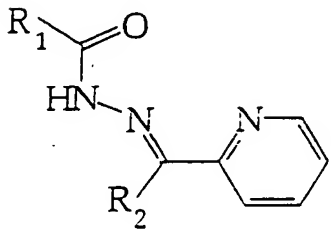
CLAIMS:

1. A 2-pyridylcarboxaldehyde isonicotinoyl hydrazone (PCIH) analogue suitable for use as an *in vivo* iron chelator, the PCIH analogue having Formula 1:



Formula 1

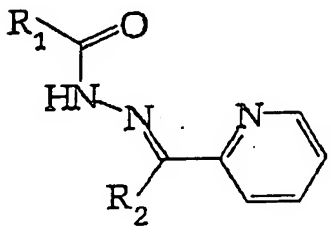
wherein R1 is an aromatic or heterocyclic group except unsubstituted pyridine and R2 is either H or OH: isomers thereof: or salts thereof.

2. The PCIH analogue according to claim 1 wherein the aromatic or heterocyclic group is hydrophobic.

3. The PCIH analogue according to claim 1 wherein R1 is a phenyl. pyridine. furan or thiophene ring optionally with alkyl. halo. nitro. amine or hydroxyl attached to any of the vacant positions on the ring.

4. The PCIH analogue according to claim 1 selected from the group consisting of 2-pyridylcarboxaldehyde m-bromobenzoyl hydrazone (PCBBH), 2-pyridylcarboxaldehyde p-aminobenzoyl hydrazone (PCAH), 2-pyridylcarboxalderhyde p-hydroxybenzoyl hydrazone (PCHH): salts thereof. and isomers thereof.

5. A pharmaceutical composition suitable for use as an iron chelator comprising a therapeutically effective amount of at least one 2-pyridylcarboxaldehyde isonicotinoyl hydrazone (PCIH) analogue having Formula 1:



Formula 1

wherein R1 is an aromatic or heterocyclic group and R2 is either H or OH; isomers thereof or salts thereof together with a pharmaceutically suitable carrier or diluent.

6. The pharmaceutical composition according to claim 5 wherein the aromatic or heterocyclic group is hydrophobic.

7. The pharmaceutical composition according to claim 5 wherein R1 is a phenyl, pyridine, furan or thiophene ring optionally with alkyl, halo, nitro, amine or hydroxyl attached to any of the vacant positions on the ring.

8. The pharmaceutical composition according to claim 5 wherein the 2-pyridylcarboxaldehyde isonicotinoyl hydrazone (PCIH) analogue is selected from the group consisting of 2-pyridylcarboxaldehyde isonicotinoyl hydrazone (PCIH), 2-pyridylcarboxaldehyde 2-thiophenecarboxyl hydrazone (PCTH), 2-pyridylcarboxaldehyde benzoyl hydrazone (PCBH), 2-pyridylcarboxaldehyde m-bromobenzoyl hydrazone (PCBBH), salts thereof, and isomers thereof.

9. The pharmaceutical composition according to any one of claims 5 to 8 formulated for subcutaneous or intravenous injection, oral administration, inhalation, transdermal application, or rectal administration.

10. A method of iron chelation therapy comprising administering to a patient a pharmaceutical composition according to any one of claims 5 to 9.

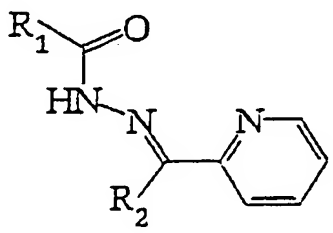
11. A method of treating an iron-overload disease in a subject, the method comprising administering to a subject a pharmaceutical composition according to any one of claims 5 to 9.

12. The method according to claim 10 or 11 wherein the pharmaceutical composition is administered in a dosage regimen of 30 - 500 mg per kg of body weight of the patient.

13. The method according to claim 12 wherein the dosage regimen is 50 - 100 mg per kg of body weight.

14. The method according to any one of claims 10 to 13 wherein the patient suffers from β-thalassemia or Friedreich's ataxia.

15. Use of a 2-pyridylcarboxaldehyde isonicotinoyl hydrazone (PCIH) analogue having the formula 1:



Formula 1

wherein R1 is an aromatic or heterocyclic group and R2 is either H or OH; isomers thereof or salts thereof in the manufacture of a medicament for the treatment of an iron-overload disease.